OMB Number: 2030-0020 Expiration Date: 06/30/2024

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A.	Applican	Recipient (Name, Address, City, State, Zip Code)				
	Name:	Mid-Ohio Regional Planning Commission				
	Address:	111 Liberty St.,#100				
	City:	Columbus				
	State:	OH: Ohio Zip	Code:	43215-5850		
В.	DUNS N	0716438370000				
II.	Is the ap	olicant currently receiving EPA Assistance? Yes No				
III.		vil rights lawsuits and administrative complaints pending against the applicant/ or, national origin, sex, age, or disability. (Do not include employment complain				
None		or, national origin, sex, age, or alsasmy. (So not morate employment complain				
IV.	discrimi	vil rights lawsuits and administrative complaints decided against the applicant/ lation based on race, color, national origin, sex, age, or disability and enclose a e actions taken. (Do not include employment complaints not covered by 40 C.F.	copy of	all decisions. I		
None	2					
V.	of the re	vil rights compliance reviews of the applicant/recipient conducted by any agenciew and any decisions, orders, or agreements based on the review. Please desc. § 7.80(c)(3))				se a copy
None						
VI.	Is the ap	olicant requesting EPA assistance for new construction? If no, proceed to VII; if	yes, an	swer (a) and/or	(b) below.	
a.		nt is for new construction, will all new facilities or alterations to existing facilities e to and usable by persons with disabilities? If yes, proceed to VII; if no, procee			structed to be	readily
		Yes No				
b.		nt is for new construction and the new facilities or alterations to existing facilitiens with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.	es will n	ot be readily ac	cessible to an	d usable
VII.		applicant/recipient provide initial and continuing notice that it does not discrimi olor, national origin, sex, age, or disability in its program or activities? (40 C.F.F			X Yes	No
a.	Do the m	ethods of notice accommodate those with impaired vision or hearing?			X Yes	No
b.		ice posted in a prominent place in the applicant's offices or facilities or, for educities, in appropriate periodicals and other written communications?	cation p	rograms	X Yes	No No
c.	Does the	notice identify a designated civil rights coordinator?			X Yes	No
VIII.		applicant/recipient maintain demographic data on the race, color, national origin of the population it serves? (40 C.F.R. 7.85(a))	ı, sex, a	ge, or	X Yes	No No
IX.		applicant/recipient have a policy/procedure for providing access to services for nglish proficiency? (40 C.F.R. Part 7, E.O. 13166)	person	s with	X Yes	No No

	n or activity, or has 15 or more employees, has it do ?? Provide the name, title, position, mailing addres	
el Jurist, Sr. Director of Communi 1 Liberty St., #100, Columbus, OH mail: njurist@morpc.org Phone: 614-	43215	
	n or activity, or has 15 or more employees, has it acts that allege a violation of 40 C.F.R. Parts 5 and 7?	
lsit https://www.morpc.org/title-vi	-/	
	For the Applicant/Recipient	
	s form and all attachments thereto are true, accurate a be punishable by fine or imprisonment or both under ap regulations.	
A. Signature of Authorized Official	B. Title of Authorized Official	C. Date
Brandi Whetstone	Executive Director	03/24/2022
	For the U.S. Environmental Protection Agency	
compliance information required by 40 C.F.R.	e applicant/recipient and hereby certify that the applica Parts 5 and 7; that based on the information submitted the applicant has given assurance that it will fully com	, this application satisfies the preaward
A. *Signature of Authorized EPA Official	B. Title of Authorized Official	C. Date

* See Instructions

Instructions for EPA FORM 4700-4 (Rev. 06/2014)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973. The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification. * Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.

* Mandatory Project Narrative File Filename: 1245-EPA Air Monitoring grant proposal_3.24.22 FINAL.p

Delete Mandatory Project Narrative File

View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File

* Mandatory Other Attachment File	lename: 1235-QA Statement Required_FINAL.pdf	
Add Mandatory Other Attachment	Delete Mandatory Other Attachment View Mandatory Other Attachment	

To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment Delete Optional Other Attachment View Optional Other Attachment

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006 Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Catalog of Federal Function or Domestic Assistance		Estimated Unobl	igated Funds	New or Revised Budget						
Activity Number		Federal	Non-Federal	Federal	Total					
(a)	(b)	(c)	(d)	(e)	(f)	(g)				
1. Project Management		\$	\$	\$ 146,623.00	\$	\$ 146,623.00				
2. Subaward				107,377.00		107,377.00				
3. Contractor				246,000.00		246,000.00				
4.										
5. Totals	,	\$	\$	\$ 500,000.00	\$	\$ 500,000.00				

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SECTION B - BUDGET CATEGORIES

6. Object Class Categories				GRANT PROGRAM, F	-UN	ICTION OR ACTIVITY			T	Total
o. c.s,co. c.acc categories	(1)		(2))	(3)		(4))		(5)
		Project Management		Subaward		Contractor			7	
a. Personnel	\$	47,471.00	\$	85,335.00	\$		\$		\$	132,806.00
b. Fringe Benefits		27,058.00		12,281.00						39,339.00
c. Travel		310.00								310.00
d. Equipment		20,000.00								20,000.00
e. Supplies		4,830.00								4,830.00
f. Contractual						246,000.00				246,000.00
g. Construction										
h. Other										
i. Total Direct Charges (sum of 6a-6h)		99,669.00		97,616.00		246,000.00			\$	443,285.00
j. Indirect Charges		46,954.00		9,761.00					\$	56,715.00
k. TOTALS (sum of 6i and 6j)	\$	146,623.00	\$	107,377.00	\$	246,000.00	\$		\$	500,000.00
7. Program Income	\$	0.00	\$	0.00	\$	0.00	\$] \$	0.00

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	SECTION	С-	NON-FEDERAL RESO	UF	RCES				
(a) Grant Program			(b) Applicant		(c) State	(d) Other Sources		(e)TOTALS	
8. Project Management		\$		\$		\$		\$	
9. Subaward									
10. Contractor									
11.									
12. TOTAL (sum of lines 8-11)		\$		\$		\$		\$	
	.,	D -	FORECASTED CASH	NE		,			
	Total for 1st Year	7	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter
13. Federal	\$ 179,477.00	\$	43,870.00	\$	47,423.00	\$	47,423.00	\$	40,761.00
14. Non-Federal	\$								
15. TOTAL (sum of lines 13 and 14)	\$ 179,477.00	\$	43,870.00	\$	47,423.00	\$	47,423.00	\$	40,761.00
	GET ESTIMATES OF FE	DE	RAL FUNDS NEEDED	FC					
(a) Grant Program		-	FUTURE FUNDING PERIODS (YEARS)						
Project Management		╁╴	(b)First	+-	(c) Second		(d) Third	 	(e) Fourth
16. Froject Management		\$	70,720.00	\$	33,790.00	\$[42,113.00	\$_	0.00
17. Subaward			39,877.00		34,000.00		33,500.00		0.00
18. Contractor			68,880.00		78,720.00		98,400.00		0.00
19.									
20. TOTAL (sum of lines 16 - 19)		\$	179,477.00	\$	146,510.00	\$	174,013.00	\$	0.00
	SECTION F	- C	THER BUDGET INFOR	RN.	ATION				
21. Direct Charges: 443285			22. Indirect	Ch	arges: 56715				
3. Remarks:									

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Standard Form 424A (Rev. 7- 97) Prescribed by OMB (Circular A -102) Page 2

OMB Number: 4040-0004 Expiration Date: 12/31/2022

Application for Federal Assistance SF-424							
L	n rrected Application	Ne Co	w ntinuation vision		Revision, select appropriate letter(s): her (Specify):		
* 3. Date Received: 03/24/2022	:	4. Applic	cant Identifier:				
5a. Federal Entity l	dentifier:			5	ib. Federal Award Identifier:		
State Use Only:							
6. Date Received b	y State:		7. State Application	lder	ntifier:		
8. APPLICANT IN	FORMATION:						
* a. Legal Name:	Mid-Ohio Regiona	al Plar	nning Commissio	n			
* b. Employer/Taxp	ayer Identification Num	nber (EIN	/TIN):	1	c. Organizational DUNS:		
d. Address:							
* Street1: Street2: * City:	111 Liberty St #100 Columbus	-					
County/Parish:	Franklin						
* State:	OH: Ohio						
Province:							
* Country:	USA: UNITED ST	TATES					
* Zip / Postal Code:	43215-5850						
e. Organizational	Unit:						
Department Name:					Division Name:		
f. Name and cont	act information of pe	rson to	be contacted on m	atte	rs involving this application:		
Prefix:			* First Nam	э:	Brandi		
Middle Name:							
* Last Name: Wh	netstone						
Suffix:							
Title: Sustainak	oility Officer						
Organizational Affiliation: Mid-Ohio Regional Planning Commission							
* Telephone Number: 614-233-4174 Fax Number:							
*Email: bwhetstone@morpc.org							

Application for Federal Assistance SF-424
* 9. Type of Applicant 1: Select Applicant Type:
D: Special District Government
Type of Applicant 2: Select Applicant Type:
M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)
Type of Applicant 3: Select Applicant Type:
* Other (specify):
* 10. Name of Federal Agency:
Environmental Protection Agency
11. Catalog of Federal Domestic Assistance Number:
66.034
CFDA Title:
Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities Relating to the Clean Air Act
* 12. Funding Opportunity Number:
EPA-OAR-OAQPS-22-01
* Title:
Enhanced Air Quality Monitoring for Communities
13. Competition Identification Number:
Title:
14. Areas Affected by Project (Cities, Counties, States, etc.):
Add Attachment Delete Atlachment View Atlachment
* 15. Descriptive Title of Applicant's Project:
Air Monitoring and Source Apportionment in Underserved Communities, Franklin County, Ohio
Attach supporting documents as specified in agency instructions.
Add Attachments Delete Attachments View Attachments

Application for Federal Assistance SF-424									
16. Congressional Districts Of:									
* a. Applicant OH-15	* b. Program/Project OH-15								
Attach an additional list of Program/Project Congressional Districts if needed.									
1234-Congressional Dist. Form 1.pdf Add Altachment Delete Atlachment View Attachment									
17. Proposed Project:									
* a. Start Date: 10/03/2022 * b. End Date: 10/02/2025									
18. Estimated Funding (\$):									
* a. Federal	500,000.00								
* b. Applicant	0.00								
* c. State	0.00								
* d. Local	0.00								
* e. Other	0.00								
* f. Program Income	0.00								
* g. TOTAL	500,000.00								
* 19. Is Application Subject to Review E	By State Under Executive Order 12372 Process?								
a. This application was made availa	ble to the State under the Executive Order 12372 Process for review on								
b. Program is subject to E.O. 12372	but has not been selected by the State for review.								
c. Program is not covered by E.O. 1	2372.								
* 20. Is the Applicant Delinquent On Ar	y Federal Debt? (If "Yes," provide explanation in attachment.)								
Yes No									
If "Yes", provide explanation and attach									
	Add Attachment Delete Attachment View Attachment								
21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001) ** I AGREE ** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.									
Authorized Representative:									
Prefix:	* First Name: William								
Middle Name:									
* Last Name: Murdock									
Suffix:									
*Title: Executive Director									
* Telephone Number: 614-233-4101	Fax Number:								
*Email: wmurdock@morpc.org									
* Signature of Authorized Representative: Brandi Whetstone * Date Signed: 03/24/2022									



EPA KEY CONTACTS FORM

OMB Number: 2030-0020 Expiration Date: 06/30/2024

Authorized Representative: Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.

Name:	Prefi	x:		First Name:	dilliam			N	liddle Name:	
	Last	Name:	Murdock	J L					Suffix:	
Title:	Exec	cutive	Director							
Comple	Complete Address:									
Stree	t1:	111 Li	berty St.							
Stree	t2:	#100								
City:		Columb	ous			State:	OH: Ohio			
Zip / I	Postal	Code:	43215			Country:	USA: UNITE	ED STATES		
Phone I	Numb	er:	614-233-41	01			Fax Number	er:		
E-mail A	Addre	ess:	wmurdock@m	orpc.org						
Payee:	Indivi	dual au	thorized to a	ccept payments	-					
Name:	Prefi	x:		First Name:	anielle			N	liddle Name:	
	Last	Name:	Spencer						Suffix:	
Title:	Acc	ountan	t							
Comple	te Ad	ldress:								
Stree	t1:	111 Li	berty St.							
Stree	t2:	#100								
City:		Columb	us			State:	OH: Ohio			
Zip / I	Postal	Code:	43215			Country:	USA: UNITE	D STATES		
Phone I	Numb	er:	614-233-41	95			Fax Numbe	r:		
E-mail /	Addre	ess:	dspencer@m	orpc.org						
			ntact: Indivi udgeting req		sored Prog	grams Offic	ce to contact c	concerning	administrativ	ve matters (i.e., indirect cost
Name:	Prefi	x:		First Name:	nthony			N	liddle Name:	
	Last	Name:	Perry						Suffix:	
Title:	Fina	ance D	irector							
Comple	te Ad	ldress:								
Stree	t1:	111 Li	berty St.							
Stree	t2:	#100								
City:		Columb				State:	OH: Ohio			
Zip / I	Postal	Code:	43215			Country:	USA: UNITE	D STATES		
Phone I	Numb	er:	614-233-41	78			Fax Numbe	r:		
E-mail Address: aperry@morpc.org										

EPA Form 5700-54 (Rev 4-02)

EPA KEY CONTACTS FORM

Project Manager: Individual responsible for the technical completion of the proposed work.

			7				1			
Name:	Prefix:		First Name:	Brandi			Middle Name:			
	Last Nar	ne: Whetstone					Suffix:			
Title:	Sustair	ability Offi	cer]					
Comple	Complete Address:									
Stree	t1: 111	Liberty St.								
Stree	t2: #10	0								
City:	Col	umbus		Stat	e: OH:	Ohio				
Zip / I	Postal Co	de: 433215		Соц	ntry: USA	.: UNITED STAT	ES			
Phone I	Number:	614-233-4	174		Fa	Number:				
E-mail A	Address:	bwhetston	e@morpc.org							

EPA Form 5700-54 (Rev 4-02)

William Murdock Executive Director Mid-Ohio Regional Planning Commission 111 Liberty St, Unit 100 Columbus, OH 43215

Director Murdock,

On behalf of The American Lung Association we are writing in support of the Mid-Ohio Regional Planning Commission's (MORPC) application for EPA's Enhanced Air Quality Monitoring for Communities grant program.

This project is designed to monitor particle pollution in communities throughout Franklin County with disproportionate health outcomes, leveraging existing air quality expertise and building upon diverse community partnerships. The American Lung Association believes environmental justice is a key to achieving equity and that this grant will assist in the collection and analyzation of key data metrics that will lead to policy solutions and strategic interventions by community partners.

The American Lung Association will offer support by serving on the project advisory committee, supporting community engagement activities, distributing information about the project to constituents and more! We look forward to continuing our partnership with MORPC to improve the health, equity, and quality of life in our community. Should you have any questions regarding our support, please contact us at Brittany.Sinzinger@lung.org or 614-279-1700.

Sincerely,

Brittany Sinzinger

Senior Manager, Development





William Murdock
Executive Director
Mid-Ohio Regional Planning Commission
111 Liberty St, Unit 100
Columbus, OH 43215

Director Murdock.

On behalf of the African American Male Wellness Agency we are writing in support of the Mid-Ohio Regional Planning Commission's (MORPC) application for EPA's Enhanced Air Quality Monitoring for Communities grant program.

This project is designed to monitor particle pollution in communities throughout Franklin County with disproportionate health outcomes, leveraging existing air quality expertise and building upon diverse community partnerships. The African American Male Wellness Agency believes environmental justice is a key to achieving equity and that this grant will assist in the collection and analyzation of key data metrics that will lead to policy solutions and strategic interventions by community partners.

The African American Male Wellness Agency will offer support by (examples: serving on the project advisory committee, supporting community engagement activities, distributing information about the project to constituents, etc). We look forward to continuing our partnership with MORPC to improve the health, equity, and quality of life in our community. Should you have any questions regarding our support, please contact us at (khampton@ncusolutions.com/614-754-1019).

Sincerely,

Kenny R. Hampton | Vice President



March 8, 2022

To Whom It May Concern:

On behalf of the Far South Columbus Area Commission, we are writing to support your efforts to conduct Enhanced Air Quality Monitoring for the communities, grant program.

There is a need for this study in the far south community. Air-pollution has been a problem for residents residing by manufacturing facilities. Studies like this, will help improve the quality-of-life issues in all communities.

Our commission looks forward to working with your organization and we are pleased that this topic is an agenda item.

Per your request, I am willing to serve on the project advisory board.

Sincerely,

Eíleen Neale

Eileen Neale Environmental Chair Far South Columbus Area Commission



William Murdock Executive Director Mid-Ohio Regional Planning Commission 111 Liberty St, Unit 100 Columbus, OH 43215

Director Murdock,

On behalf of The Breathing Association, we are writing in support of the Mid-Ohio Regional Planning Commission's (MORPC) application for EPA's Enhanced Air Quality Monitoring for Communities grant program.

This project is designed to monitor particle pollution in communities throughout Franklin County with disproportionate health outcomes, leveraging existing air quality expertise and building upon diverse community partnerships. The Breathing Association believes environmental justice is a key to achieving equity and that this grant will assist in the collection and analyzation of key data metrics that will lead to policy solutions and strategic interventions by community partners.

The Breathing Association will offer support by supporting community engagement activities and sharing educational outreach tools. We look forward to continuing our partnership with MORPC to improve the health, equity, and quality of life in our community. Should you have any questions regarding our support, please contact us at 614-457-4570 ext. 114 or jeffrey.schulze@breathingassociation.org.

Sincerely,

Jeffrey Schulze

CFOO



William Murdock
Executive Director
Mid-Ohio Regional Planning Commission
111 Liberty St, Unit 100
Columbus, OH 43215

Director Murdock,

On behalf of YWCA Columbus, I am writing in support of the Mid-Ohio Regional Planning Commission's (MORPC) application for EPA's Enhanced Air Quality Monitoring for Communities grant program.

This project is designed to monitor particle pollution in communities throughout Franklin County with disproportionate health outcomes, leveraging existing air quality expertise and building upon diverse community partnerships. YWCA Columbus believes environmental justice is a key to achieving equity and that this grant will assist in the collection and analyzation of key data metrics that will lead to policy solutions and strategic interventions by community partners.

YWCA Columbus will offer support by supporting community engagement activities, and distributing information about the project to constituents. We look forward to continuing our partnership with MORPC to improve the health, equity, and quality of life in our community. Should you have any questions regarding our support, please contact me at jolinger@ywcacolumbus.org.

Sincerely,

Jillian Olinger Chief Mission Officer, YWCA Columbus



In reply refer to: 0256554941 May 28, 2019 LTR 4168C 0 31-1009675 000000 00

00015297

BODC: TE

MID OHIO REGIONAL PLANNING COMMISSION % LORETTA AKERS 111 LIBERTY ST STE 100 COLUMBUS OH 43215

037724

Employer ID number: 31-1009675

Form 990 required: N

Dear Taxpayer:

We're responding to your request dated May 20, 2019, about your tax-exempt status.

We issued you a determination letter in February 1982, recognizing you as tax-exempt under Internal Revenue Code (IRC) Section 501(c) (03).

We also show you're not a private foundation as defined under IRC Section 509(a) because you're described in IRC Section 509(a)(2).

Donors can deduct contributions they make to you as provided in IRC Section 170. You're also qualified to receive tax deductible bequests, legacies, devises, transfers, or gifts under IRC Sections 2055, 2106, and 2522.

In the heading of this letter, we indicated whether you must file an annual information return. If you're required to file a return, you must file one of the following by the 15th day of the 5th month after the end of your annual accounting period:

- Form 990, Return of Organization Exempt From Income Tax
- Form 990EZ, Short Form Return of Organization Exempt From Income Tax
- Form 990-N, Electronic Notice (e-Postcard) for Tax-Exempt
 Organizations Not Required to File Form 990 or Form 990-EZ
- Form 990-PF, Return of Private Foundation or Section 4947(a)(l)
 Trust Treated as Private Foundation

According to IRC Section 6033(j), if you don't file a required annual information return or notice for 3 consecutive years, we'll revoke your tax-exempt status on the due date of the 3rd required return or notice.

You can get IRS forms or publications you need from our website at www.irs.gov/forms-pubs or by calling 800-TAX-FORM (800-829-3676).

If you have questions, call 877-829-5500 between 8 a.m. and 5 p.m., local time, Monday through Friday (Alaska and Hawaii follow Pacific

0256554941 May 28, 2019 LTR 4168C 0 31-1009675 000000 00 00015298

MID OHIO REGIONAL PLANNING COMMISSION % LORETTA AKERS 111 LIBERTY ST STE 100 COLUMBUS OH 43215

time).

Thank you for your cooperation.

Sincerely yours,

Kim A. Billups, Operations Manager Accounts Management Operations 1

Quality Assurance Statement

The Research & Data Officer, which is a high-level management position at MORPC with at least 7 years of professional experience, will be responsible for the quality assurance and quality control aspects of the project. The Officer leads and oversees MORPC's data & research section and manages the agency's ongoing data analysis functions, including implementing data quality standards and procedures, streamlining data collection, data processing, data analysis, and data visualization. MORPC takes great pride in its data work and has been recognized as both a regional and national leader for providing sound data sets and analyses. MORPC typically involves multiple staff and committee members to review datasets and provide input.

The data quality of low-cost sensors typically do not meet regulatory air quality monitoring standards. However, with appropriate calibration and data averaging, low-cost sensors can provide sufficient data quality to answer questions of interest to researchers and community groups (e.g., Malings et al. 2019 a, b, Giordano et al. 2021). Due to the importance of sensor quality control, the Consultant will use a multistep approach to post process PM_{2.5} data into the model to minimize the impact of sensor malfunction, intra-sensor bias, and environmental and operational parameter impact. The low-cost air quality sensor quality assurance program of this proposal can be divided into (A) pre-deployment collocation, (B) infield performance verification, (C) sensor integration with air quality models, and (D) data archiving activities.

A. Pre-deployment Collocation

Before sensor deployment, verification of correct operation and validation of data quality will be carried out using collocation experiments. These are a well-established method for air quality sensor performance assessment whereby groups of sensors are deployed near a trusted regulatory-grade air quality monitoring site and data intercompared between these instruments. The project team has previous experience conducting these activities.

In the period of July to October 2021, a total of 29 PurpleAir sensors were collocated with a regulatory air quality monitoring station at Smoky Row in Columbus, Ohio. This station (AQS ID 39-049-0038) is considered to be a near-roadside station and is operated by the Ohio EPA. It includes regulatory-grade (Federal Equivalent Method) near-real time monitoring instruments for PM_{2.5}, NO₂, and CO. The datasets derived from these collocations were used to (1) verify the correct and consistent operation of the PurpleAir sensors by comparing their measurements with each other within each batch, (2) compare the measurements of the PurpleAir sensors with the regulatory-grade measurements of PM_{2.5} from the monitoring station, and (3) apply and validate new and existing sensor calibrations (e.g. <u>Barkjohn et al. 2020</u>) to improve the agreement between the low-cost sensors and regulatory-grade instruments. Quantitative and qualitative assessments of sensor performance were performed according to a US EPA guidance document on <u>Performance Testing Protocols, Metrics, and Target Values for Fine Particulate Matter Air Sensors</u>. For this project, we propose a similar campaign of pre-deployment collocations at the Smoky Row site for all low-cost air quality sensors. For the PurpleAir sensors, the same established procedures will be followed as described above. These procedures can be easily modified to incorporate PM_{2.5} data from the Clarity nodes as well.

A. In-field Performance Verification

During deployment, sensor performance will be tracked both qualitatively and quantitatively using internal self-verification checks (1-4), network-level intercomparisons (5), continuous co-location (6) and

Quality Assurance Statement

maintenance activities (7). The systemic quality control is laid out in Lu et al. and consists of four internal self-verification checks: (1) remove malfunctioning sensor data based on a low frequency of change (i.e., 5 h moving standard deviation of zero) in their readings across time; (2) discard apparent PM_{2.5} outliers with extreme hourly values that exceed the sensor's effective measurement range in both channels and readings higher than 3 times calculated median absolute deviation by one channel within a calendar month; (3) identify periods of prolonged interruption or data loss due to power outages or data communication loss using a 75% completeness criterion (four or more 10 min measures per hour and 18 h or more in a day); (4) evaluate the degree of agreement from dual-channel readings for each sensor within a given month of operation based on calculated statistical anomaly detection indicators as the coefficient of determination $R^2 > 0.8$ and mean absolute error $< 4 \mu g/m^3$. Given the reported saturation issues of PurpleAir sensors at high particle mass loadings (>50µg/m³), leading to higher measurement bias and uncertainty in the mean absolute error indicator, mean absolute percentage error > 0.3 is adopted as an additional criterion to handle the sensor's measurement limit at high particle mass loadings. (5) Intercomparisons of all field-deployed sensors will facilitate qualitative performance assessment and error detection. Although we expect differences at individual sites, we also expect some common regional and diurnal trends to be visible across all sensors; sensors failing to capture these trends will be flagged as malfunctioning. (6) At least one PurpleAir sensor and one Clarity node will be operated continuously in close proximity to the Smoky Row monitoring site. This will allow for ongoing assessments of sensor performance with respect to regulatory-grade instruments. When performance metrics fall outside specified bounds, these time periods will be flagged for follow-up to consider whether low-cost sensor data from this time period will be included in analysis due to its potentially low quality. (7) Based on all previous steps, weekly network performance assessments will be made by the project team, and decisions will be taken on removing erroneous sensor data from the analysis chain and planning maintenance or replacement of malfunctioning sensors.

B. Air Quality Model with Sensor Integration

The real-time hyperlocal air quality model will be based on a mixture of validated scientific models such as the Comprehensive Air Quality Model with extensions (CAMx; regional chemistry), Weather Research and Forecasting (WRF; meteorology and weather), Pollutant dispersion around the built environment, and real-time traffic congestion data to produce a real-time map of pollution concentrations at high spatial resolution. The model's concentration estimates are tethered to the actual measurements produced by all sensors (low-cost and reference-grade instruments) within the modeling domain. Therefore, the model's performance is greatly strengthened by the presence of sensors and will reduce model biases. In locations between sensors, the model will geo-interpolate the pollution concentrations using methods such as voronoi nearest-neighbor tessellation.

C. Data Archiving

Finally, at all stages, archiving of both raw and processed data and documentation of analysis methods will allow for robust traceability of the data analysis and quality control process, and also enable potential future re-analysis of the data using improved methodologies.

¹ Lu, Y.; Giuliano, G.; Habre, R. Estimating hourly PM2.5 concentrations at the neighborhood scale using a low-cost air sensor network: A Los Angeles case study. Environ. Res. 2021, 195, 110653

LAYLA M. ABRAHAM, MPH

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PROFESSIONAL EXPERIENCE

Environmental Health Educator

December 2020—Present

Franklin County Public Health | Columbus, Ohio

- Identifies educational evidence-based strategies using a policy, systems, and environmental health approach, develops tools and resources, provides technical assistance and actively participates on various health education and promotion committees.
- Provides guidance to agencies and organizations in the assessment of health education needs, and in the development and delivery of health education programs.
- Collaborates with local and state agencies or organizations to educate and engage in initiatives promote equity, reduce health disparities, and address social determinants of health in support of the agency's environmental health improvement and strategic plan.

Active Living Health Educator

October 2019—December 2020

Franklin County Public Health | Columbus, Ohio

- Collaborated with health specialists, stakeholders, and community groups to determine community health needs, the availability of services, and the development of goals for meeting needs.
- Utilized data to identify community needs for use in training and education on program interventions designed to encourage healthy lifestyles.
- Developed and presented active living programs through training workshops and school or community presentations.
- Special responsibilities during COVID-19: Activated into Incident Command System from March 2020 June 2022 as an Assistant Public Information Officer to create COVID-19 social media and website content, communicate messages about COVID-19 to the public, create COVID-19 guidance documents and masking/vaccination media campaigns.

Community Health Improvement Coordinator

August 2018—October 2019

Hospital Council of Northwest Ohio | Toledo, Ohio

- Oversaw and developed community health improvement projects.
- Facilitated community wide collaboration and provided customer service throughout the community health improvement process.
- Facilitated county wide data collection processes to gather health data and provided customized, county-level health assessments.
- Trained and oversaw graduate assistants to meet health assessment deadlines.
- Facilitated focus groups, analyzed qualitative data, and developed qualitative data reports.
- Spearheaded a new product offering as a result of my experience in qualitative research and analysis.

Community Health Improvement Intern

April 2018—August 2018

Hospital Council of Northwest Ohio | Toledo, Ohio

- Assisted Community Health Improvement Coordinators in the development of assessment reports.
- Served as a primary data collection specialist.
- Assisted in the development of a strategic plan for the Northwest Ohio Opiate Alliance Coalition.

Kidney Foundation of Northwest Ohio Program Evaluation Consultant May 2017—August 2018 Health Promotion Consulting Services | Toledo, Ohio

- Recruited medical professionals to participate in telephone interviews.
- Managed undergraduate students to conduct interviews with renal patients and medical professionals.
- Conducted interviews with medical professionals and assisted with focus groups.
- Developed telephone interview scripts and evaluation surveys.

Graduate Research Assistant

January 2017—August 2018

University of Toledo | Toledo, Ohio

- Awarded a graduate assistantship upon acceptance into the University of Toledo's Master of Public Health program.
- Conducted literature reviews, database searches, data entry, and statistical analysis.
- Collaborated with teams of graduate students conducting research pertaining to health promotion and health education.

EDUCATION

Master of Public Health (MPH)—Health Promotion and Education

University of Toledo - Toledo, Ohio

Bachelor of Science—Exercise Science

Bluffton University - Bluffton, Ohio

Jennie Watt McAdams

Ex. 6 Personal Privacy (PP)

Innovative, strategic leader in public health. Emphasizes health equity in programmatic development and focuses on climate change and sustainability efforts in public health practice. Driven by quality improvement and best practice in improving the social determinants of health. Experience in coordinating public health accreditation processes and leading quality improvement efforts.

MOST RECENT EMPLOYMENT

Franklin County Public Health

Supervisor, Sustainability Section (October 2019-Present)

- Responsible for the management and oversight of all sustainability and climate related work
 - Initial Chair of the Ohio Public Health Resiliency Coalition, sponsored by the Ohio Public Health Association
 - o Lead in the white paper "Climate Resilience in Ohio"
 - o Member of MORPC Sustainability Advisory Committee
 - Member Sustaining Scioto
 - o Partnering with the City of Columbus on multiple climate efforts
 - Member of Columbus Greenspot Committee
 - o Co-Chair of National Environmental Health Association's Climate Change Committee
 - NACCHO Global Climate Change Workgroup member
- Management of Solid Waste, Healthy Homes and Nuisance programs
- Point of contact for community outreach and events
- Responsible for multiple grant applications, deliverables and reports as well as budget

Supervisor, Community Engagement and Health Promotion (April 2017-October 2019)

- Responsible for the management and oversight of all health promotion and community engagement programs and activities, including
 - SWACO Innovation Grant
 - Wrote and executed SWACO Innovation grant focused on food waste reduction and agency wide composting
 - o Farm to School Program, OhioDays: My Plate, My State
 - \$1.5 million Community Cessation Initiative ODH grant
 - \$100,000 Tobacco Prevention and Cessation grant
 - Community Health Action Teams
 - Safe Routes to School and physical activity initiatives
- Department lead for sustainability and climate change efforts
 - Initial Chair of the Ohio Public Health Resiliency Coalition, sponsored by the Ohio Public Health Association
 - Lead in the white paper "Climate Resilience in Ohio"
 - Workgroup member of MORPC Energy workgroup and Columbus Food Waste Initiative
- · Management for a team of seven employees
- Point of contact for community outreach and events
- · Supervision and strategic planning of all health promotion and community engagement staff
- Chair of the Community Partnership Committee

Franklin County Public Health

Accreditation, Quality Improvement and Performance Improvement Coordinator and Business Analyst (August 2014-April 2017)

PREVIOUS EMPLOYEMENT

- Penn Medicine: Information Services Service Coordinator
 - January 2013 August 2014
- Family Service Association of Bucks County: Coordinator-Volunteer Services
 - July 2012 January 2013
- National Museum of the United States Air Force-Wright Patterson AFB: Volunteer Coordinator
 - May 2009 June 2012

PROFESSIONAL DEVELOPMENT

Kaizen Facilitator • Full-Scale Exercise Controller • LeanOhio BootCamp • The Ohio State University Quality Improvement Bootcamp • Homeland Security Exercise and Evaluation Planning certified

PROFESSIONAL ASSOCIATIONS

National Environmental Health Association-Climate Change Committee • Ohio Public Health Association • Ohio Public Health Climate Resiliency Coalition • National Association of City and County Health Officials-Climate Change Committee

PROFESSIONAL PRESENTATIONS

National Association of Local Boards of Health Annual Conference • Ohio Public Health Combined Conference The Open Forum for Quality Improvement • American Geophysical Union • Accreditation Learning Community Conference • National Environmental Health Conference • Ohio Environmental Health Association Annual Conference

PROFESSIONAL PUBLICATIONS

Measuring National Environmental Health Association Member Attitudes, Awareness, and Behaviors on Climate Change: Results From Three Consecutive Annual Surveys-Journal of Environmental Health, April 2019

EDUCATION

Wright State University Master of Public Health - May 2012

Wright State University Bachelor of Arts, French - May 2007



Brandi Whetstone

Ex. 6 Personal Privacy (PP)

Environmental sustainability is my passion, which has steered my professional career from the very beginning. I bring a holistic and collaborative approach to my work, and I thrive in a flexible work environment supporting opportunities for growth.

Skills

- Demonstrated sustainability expertise with 20+ years of experience in leadership positions
- Skilled at engaging a range of organizations including local and state government, nonprofits, and private sector
- Strong management and supervisory skills
- Excellent writing, editing, and presentation skills with strong attention to detail

Experience

1/2019 - PRESENT

Sustainability Officer / Mid-Ohio Regional Planning Commission, Columbus, OH

- Manage Sustainability Programs in air quality, energy and climate, water, and natural resources and supervise a team of sustainability professionals.
- Lead the development of the Regional Sustainability Agenda to align members around common goals and engage diverse partners and stakeholders through a committee.
- Promote the agency's diversity, equity, and inclusion efforts through outreach plans, hiring and recruitment practices, committee appointment recommendations, and cocreation of an equity resource guide for sustainability planning.
- Manage top-level Sustainability Advisory Committee composed of elected officials and regional leaders to guide the work of MORPC's sustainability focused programming.
- Lead MORPC's Sustainable 2050 program, composed of 34 local governments and regional organizations committed to the regional sustainability goals, and support members through regular forums, technical assistance, and a recognition program designed to advance sustainability and DE&I strategies.
- Manage and provide subject-matter expertise on cross-departmental projects, including work with a Data & Mapping team to identify and interpret relevant data, create meaningful targets, and report on the progress of measurable sustainability goals.
- Provide direct support for annual sustainability conference, including identifying speakers for the keynote and breakout sessions, securing sponsorships, and promotion.

1/2018 - 1/2019

Interim Director/ Assistant Director, Energy & Air Quality Department / Mid-Ohio Regional Planning Commission, Columbus, OH

 Stepped up to lead the department as interim director during a staff vacancy and previously filled in for the director during extended leave.

- Worked closely with the agency leadership and management team to advance priorities around budgets and funding, hiring, reporting requirements, production goals, personnel support, program marketing, and annual staff evaluations.
- Directly managed staff and programming in energy planning, air quality, and low-income home weatherization and home repair programs.
- Organized successful annual Home Weatherization Showcase events to demonstrate the value of energy efficiency improvements performed by MORPC in close coordination with the client, weatherization contractors, MORPC staff, and a local TV show.
- Promoted to Assistant Director position from Sr. Program Manager, and prior to that served as a program manager and outreach specialist for environmental programs.

Other Selected Contributions from MORPC:

- Managed U.S. EPA Climate Showcase Communities grant program (2012-2015), in close coordination with partners to deliver energy audits and environmental assessments to manufacturing companies and managed a budget of nearly \$1M.
- Helped initiate the Sustaining Scioto project with several partners to identify risks to water resources from climate change, and currently manage staff on the implementation through a Sustaining Scioto Board.
- Developed Green Events Guide with Ohio EPA and Solid Waste Authority of Central Ohio (SWACO) for EcoSummit 2012 at the Greater Columbus Convention Center.
- Lead the Materials Management Working Group, developed resources for food waste reduction and composting, and supported launch of Ohio By-Product Synergy Network.

10/2007- 4/2010

Conservation Program Coordinator / Sierra Club Ohio Chapter, Columbus, OH

- Implemented and built partnerships for local Clean Water Campaign and provided direct support for statewide energy efficiency and public lands initiatives.
- Provided input on City of Columbus 40-year Wet Weather Management Plan, including recommendations for green infrastructure (GI), and developed GI educational materials.

1/2006 - 9/2007

Executive Director / Buckeye Forest Council, Columbus, OH

- Managed organizational operations and budget, programs, communications and engagement, policy advocacy, and fundraising with support from the Board.
- Wrote public comments on state and federal forestry plans, and worked with public officials, non-profit organizations, and partners to advocate for conservation goals.

5/1998 - 12/2005

Research Database Manager/Senior Field Manager / Ohio Citizen Action, Columbus, OH / Toledo, OH

- Managed Access database of campaign finance disclosures from the Ohio Secretary of State, standardized the data, and assisted with "Money in Politics" reports.
- Researched and wrote articles and reports on campaign finance and election reform.

Education

12/1998

B.A. Environmental Policy & Analysis / Bowling Green State University, Bowling Green, OH

Air Monitoring and Source Apportionment in Underserved Communities, Franklin County, Ohio Applicant: The Mid-Ohio Regional Planning Commission (MORPC)

111 Liberty Street, Suite 100 Columbus, Ohio 43215 Primary Contact: Brandi Whetstone 614-233-4174

Bwhetstone@morpc.org
DUNS: 071643837
No set-aside

Applicant Organization: The Mid-Ohio Regional Planning Commission (MORPC) is Central Ohio's regional council of more than 70 members, comprised of local governments and regional organizations across a 15-county region. MORPC brings communities of all sizes and interests together to collaborate on best practices and plan for the future of the growing region through programs and initiatives in transportation planning, data and mapping, sustainability, and government affairs. MORPC is part of a network of agencies that issues air quality forecasts and notifies the public when ozone and particle pollution levels are expected to be unhealthy for sensitive groups of people. MORPC's Air Quality Program strives to make Central Ohio's air safer to breathe and increases awareness of health impacts and clean air solutions through education, engagement, and partnerships.

Project Partner: MORPC's partner and subrecipient for this grant will be Franklin County Public Health (FCPH) whose primary contact will be the Sustainability Supervisor, Jennie McAdams.

Project Location: The project will take place within the limits of Franklin County, Ohio, inclusive of the City of Columbus and surrounding suburban communities, in zip codes identified through data aggregation to address underserved populations that are most likely impacted by poor air quality.

Air Pollutant Scope: Particulate Matter (PM2.5)

Budget Summary:

EPA Funding Requested	Total Project Cost
\$500,000	\$500,000

Project Period: October, 2022 - October, 2025

Project Description:

MORPC and FCPH will focus on underserved communities impacted by emissions from mobile sources including diesel freight traffic and stationary sources using particulate matter monitoring and modeling tools placed at community sites. Sites will be chosen based on multiple levels of social and health vulnerability data, including COVID-19 mortality and morbidity data. Resulting data from 18 months' worth of air quality monitoring and modeling will be used by MORPC and FCPH to identify and understand the distribution and causes of particulate matter pollution and create interventions based on disproportionate impacts and source drivers.

Section 1- Project Summary and Approach

A. Overall Project - MORPC will serve as the project manager, working with local partner FCPH to implement a hyperlocal air quality monitoring network with a focus on increasing particle pollution (PM2.5) data collection, identifying source drivers, strengthening community engagement, and elevating environmental justice concerns. The data collected from this network will be shared with a consultant to analyze the PM2.5 concentrations and source contributions. The project will take place within the limits of Franklin County, Ohio in zip codes identified through data aggregation that focus on vulnerable populations most impacted by poor air quality and COVID-19. A detailed project summary along with corresponding activities is found below.

- 1. Early project steps will include the purchase and calibration of PM monitors (e.g., Clarity Node-S monitors) to be ready for deployment once we host initial community meetings for input on monitor placement.
- 2. MORPC and FCPH will identify and convene a Community Advisory Board (CAB). Stakeholders will include those identified in the application process via letters of support as well as local leaders and community representatives residing in targeted zip codes. The CAB will be the initial outlet where data will be shared. Additionally, the CAB will help inform project planning and community engagement. Prior to an initial meeting, the project team will develop a presentation describing the project and project materials including data sets that will help identify high need areas for monitor placement. This data will include socioeconomic data, health data including chronic disease, asthma and COVID-19 prevalence/impact, pollution source data, and locality data of potential freight hotspots.
- 3. Project team will post an RFP for an air quality data monitoring and modeling consultant. The project will require an external contractor with air pollution and monitoring equipment expertise, capability to analyze the existing and proposed monitoring data gathered at a hyperlocal level, apply modeling tools to identify source contributions incorporating both modeled and measured data, and provide tools to share this data and information in a digestible way to the community. The project team will evaluate proposals against project criteria and finalize the selection and contracting in accordance with all applicable policies and procedures.
- 4. The contractor will set up a hyperlocal PM2.5 model and along with feedback from the CAB, will prioritize siting locations. The contractor will provide a real-time model which incorporates existing monitoring data to provide communities with insights on pollution levels and sources for the project duration. The model should show source contributions broken down by car traffic, truck traffic, area sources, point sources, background air pollution, and non-road sources.
- 5. The project team will deploy air monitors at schools, libraries, and community organizations in underserved communities identified with the help of the CAB. Deployment requires coordination with each host site to install and ensure that monitors are working properly. Outreach materials will be provided for each location where a monitor is sited.
- 6. Community awareness of the project will be accomplished using traditional and social media methods. MORPC and FCPH's communications teams will be consulted to heighten visibility of the project. The contractor will set up a community engagement feedback tool in collaboration with MORPC, FCPH, and the CAB to identify specific criteria for reporting to identify community concerns.

- 7. The contractor will provide live air quality screens with rotating educational information, at identified locations within Franklin County. Information displayed will rotate between background educational information on air quality, maps of current air quality conditions in the region, and simple scripted health action recommendations based on current air quality. This information will also be available online and promoted through various communication channels.
- 8. For a period of 18 months, data will be gathered and monitored by the contractor to analyze source pollutants. The contractor will present findings from data analysis every 6 months in collaboration with the project team. Throughout the entirety of the project, real-time data will be available to the public. CAB meetings will be hosted on a regular schedule and ongoing maintenance of monitors will be completed by the project team.
- 9. In coordination with the CAB and the contractor, the project team will create educational materials and presentations focused on air quality, health, and pollutants to educate the broader community, with materials also created for school-aged students in the community. It will serve to engage the community and create buy-in for future initiatives or policy solutions that result from the project.
- 10. To report the outcomes of the project, a multilingual Air Quality Analysis Dashboard will be created summarizing spatial and temporal findings over the modeling duration, summarize the average composition of contributing sources, and will be designed for ease of use for community members. The project team will use this information to report final outcomes to partners and the community. The intention is that the pollution data will be used by the project team and partners to inform programs and initiatives in the affected areas.
- **B. Project Significance** The project team will focus on areas with populations that are most vulnerable to health impacts from air pollution and COVID-19. The particle pollution data and model will meet the objectives by allowing the project team to better understand air quality hot spots and evaluate air quality patterns and sources. The project will help illuminate potential disparities in air pollution levels within underserved communities, identify unknown sources that are both temporary and ongoing, and evaluate the impact of mobile sources, including freight traffic, on air quality.

This project is aligned with MORPC's Regional Sustainability Agenda, with goals and measurable objectives that make Central Ohio a better place for all residents, and actions that promote a sustainable and equitable region. This project will also bolster several complementary initiatives in the region, including the City of Columbus Climate Action Plan and FCPH's Strategic Goal of achieving Equity. The data can also be leveraged to quantify air quality impacts of the transformation of key corridors to more walkable, bike friendly, and transit friendly places through the LinkUS initiative.

MORPC's annual report for ground-level ozone and particle pollution from November 2020 - October 2021 shows continuous air quality improvement in the Columbus Region over the past 29 years measured by federal standards. However, the two regulatory monitors used to measure PM2.5 are meant to capture regional level data, whereas low-cost air quality monitors can be deployed for neighborhood level data, providing a more detailed look at air pollution.

In 2020, MORPC and FCPH partnered to establish an air quality monitoring network using PurpleAir monitors to measure air pollution across neighborhoods to help guide strategies that improve local conditions. The program used sociodemographic data (percent population below poverty line, non-

white populations, age 65+, and under 5), and health data (adult asthma rates and COVID-19 rates) to identify priority zip codes for monitor placement. This project is in the data collection phase for the next nine months and will conclude with the creation of a report to determine next steps. The proposed EPA project will build on this experience and greatly expand the team's ability to conduct community and partner engagement along with the advanced technical work necessary to analyze air pollution patterns and sources at the hyperlocal level.

This project is also significant in the context of population growth. According to the 2020 census, the City of Columbus ranked 9th in growth nationwide among metropolitan areas and was the only midwestern city to grow by more than 100,000 residents. Central Ohio is still on track to be a region of 3 million residents by 2050 based on current projections. This project will not only illuminate environmental justice issues tied to air pollution, but also elevate the need for proactive and sustainable planning to accommodate growth. The data could support the need for more sustainable development, electric vehicle infrastructure, and improved transit and active transportation infrastructure.

Franklin County is also home to several industrial sources. The 2019 Ohio EPA Emissions Inventory found that the greatest stationary air quality contributors to PM2.5 concentrations include unpaved road traffic from a solid waste disposal facility, and metal processing facilities (Ohio EPA, 2019 EIS Data). This data is valuable, but may not capture local scale air quality impacts, identify unknown sources, nor better understand how smaller sources may impact underserved communities. The proposed model will provide local scale air quality data to help better understand sources contributing to PM2.5 concentrations.

In 2018, MORPC conducted a community-driven study in the Rickenbacker Area located in the southern portion of the Columbus metro area. Rickenbacker is home to one of the world's only cargo-dedicated international airports, rail yard intermodal facility, and a logistics study. The study provided recommendations to position the area as a complete community including mobility, transportation, and economic growth. The study does not directly address air quality, but air quality may be exacerbated from forecasted increases in truck traffic volume, which may impact residents.

Section 2— Community Involvement

A. Community Partnerships - MORPC and FCPH will partner directly with multiple stakeholders throughout the county. Stakeholders will include non-profits and other institutions at the community level with a vested interest in public health and addressing disparities across underserved neighborhoods. Several stakeholders have demonstrated their commitment to the project through letters of support (see attachments), including American Lung Association, Breathing Association, African American Male Wellness Agency, and Far South Area Commission, among others. MORPC and FCPH have previously worked with these partners on air quality and public health education, including a classroom and school district level air quality project and equitable COVID-19 vaccine distribution.

Working with partners and community leaders in local Equity Advisory groups, we will form the basis of the Community Advisory Board (CAB). Through the CAB, partners will directly assist with the design and performance of the project by providing input at key decision points and assisting with community engagement plans and opportunities.

The project team will reach out to the City of Columbus's Sustainable Columbus initiative to partner through their Community Advocates program, which trains and hires residents from each community to engage neighbors on the importance of climate and sustainability issues. The project team will leverage

existing and future community outreach activities to inform the public in underserved neighborhoods about air quality conditions and where to find more information.

B. Community Engagement - The greatest opportunity of the grant is the coordination with and engagement of our community. Through this combined effort, the project team will conduct outreach and request participation from Columbus Neighborhood Area Commissions, which are resident-based bodies empowered by the City of Columbus to be a voice for their local neighborhood. Additionally, the project team will present information to resident-based Community Health Action Teams to engage members and recruit residents to participate in the CAB. MORPC and FCPH have previously engaged with several of these groups about air quality with presentations at their regularly scheduled meetings. While these residents will be the primary champions of the project, the project team will continue to leverage partnerships to engage communities. Engagement opportunities will include public events as well as speaking opportunities at resident and community-based forums.

The project provides multiple platforms for community engagement, including consistent input from the CAB throughout the entire process; public access to a real-time site and model data visualization to drive community behavior change and reduce pollution exposure; development of air quality education opportunities to increase awareness of air quality issues; hosting rotating screens throughout Franklin County to display live maps of community-level air quality; and presentation of final project results (e.g., a dashboard or story map) incorporating the real-time public facing model, to various community groups and stakeholders. We will also explore partnerships with the Central Ohio Transit Authority (COTA), leveraging their new sustainability plan, along with their public outreach channels including digital signage at bus stops along high use routes.

Partnering with host sites, we will leverage opportunities for education, engagement, and outreach. For example, schools and local libraries have been valuable partners in the past for offering avenues to distribute literature, as well as host presentations or forums. The team will identify monitor locations with input from the CAB, with special consideration for public-facing facilities and programs, to maximize the public awareness and engagement opportunities within underserved communities.

The project team will work with the CAB and our communications team to create educational materials and will work with partners to identify other existing avenues to increase project visibility and engagement. The team will also provide project information to partners and the public through electronic communications and marketing.

Franklin County Public Health (FCPH) will be the lead regarding communication and community engagement related to public health implications of air quality and will work as a conduit between the project and jurisdictional community teams. FCPH has a wide range of partners throughout the community and has conducted numerous outreach and educational campaigns, most recently targeting underserved and vulnerable populations disproportionately impacted by COVID-19.

Section 3– Environmental Justice and Underserved Communities - MORPC studies have focused on socioeconomic and quality of life impacts on various communities throughout Franklin County. The real-time hyperlocal scale air quality model informed by monitoring would strengthen air quality data and

identify underserved communities that would benefit from further environmental justice and public health intervention and policy development.

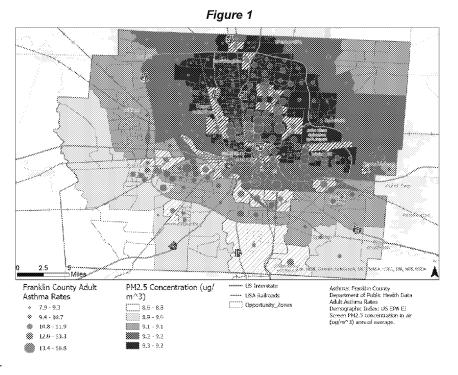
The COVID-19 pandemic highlighted disparities long known to exist throughout Central Ohio

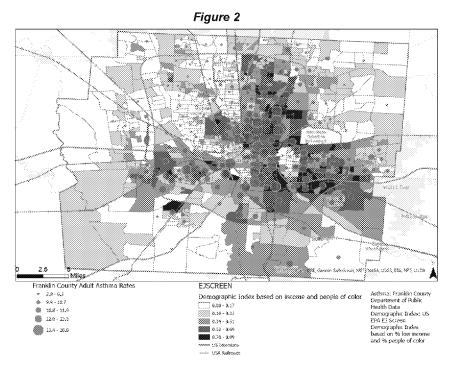
communities. MORPC's COVID-19
Policy Brief on Public Health details
numerous impacts to minority and
other frontline communities in Central
Ohio. In Ohio, CDC statistics attribute
30% of age adjusted COVID-19 deaths
to Black residents even though Black
residents make up only 12% of the
population. Hispanic and Latinx
Ohioans (4% of the population)
represent 6% of COVID-19 deaths.

Figure 1 shows the prevalence of asthma rates overlayed with sociodemographic factors such as percent low income and persons of color, as reported in EJScreen. This project will aim to highlight the air quality in these areas with poor health outcomes and pinpoint the air pollutants that are having adverse effects, such as diesel or factory emissions.

Figure 2 shows the relationship between asthma rates in Franklin County and annual PM2.5 concentration. The map demonstrates a spatial relationship between higher asthma rates and elevated PM2.5 concentrations. PM2.5 is known to exacerbate adverse health outcomes, including but not limited to decreased respiratory function, and aggravation of asthma¹.

Developing a real-time hyperlocal air quality model and making information accessible throughout Franklin County will provide data to local municipalities and community groups to help them better understand the air quality in





¹ US EPA. Health Effects of Particulate Matter. Accessed at: https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm

6

their communities. Additionally, the presence of real-time air quality data displayed in community locations will help educate residents on the adverse impacts of poor air quality and how residents can make adjustments in their daily lives to reduce air pollution exposure. An overarching goal of this project will be to involve and engage community members and partners in utilizing the data to inform decisions and empower and equip residents to advocate for policy changes, best practices, and programs.

Section 4– Environmental Results – Outcomes, Outputs, and Performance Measures

A. Expected Project Outputs, Outcomes, and Performance Measures - The project will leverage existing air quality expertise to yield a multitude of anticipated outputs, outcomes, and associated performance measures, as seen in the table below. The outcomes and performance measures are either qualitative or quantitative. The outcomes and performance measures are labeled as either qualitative (*) or quantitative (#). Project progress, expenditures, and all reporting requirements will be tracked through check-ins and milestones with the project team and consultant. Clear deliverables will be laid out in all subcontract agreements.

Table 1. Expected Project Outputs, Outcomes and Performance Measures.

Expected Output	Expected Outcome	Performance Measure(s)/Deliverable(s)
Deployment of low-cost PM monitors in and near underserved communities.	 Near real-time air quality data availability for communities and stakeholders. Creation of a dense PM monitor network to fill gaps in underserved communities with disproportionate environmental and health impacts. 	 Purchase of 20 monitors. # Installation of 20 monitors. # 20 monitors delivering near real-time data to the online model platform except during maintenance periods. #
Analysis of 18 months of PM monitor data to identify air pollution patterns.	 Identification of air pollution hotspots and spatial patterns. Understanding of the confidence and lifetime of monitors. 	 Completed QA/QC of all data. * Documentation of temporal and spatial trends including hotspots. * Quantification of confidence and lifetime of monitors. #
Near real-time PM2.5 concentrations available to support communities and stakeholders in their outdoor activities and decision making. #	 Increased access to user-friendly interfaces to visualize long and short-term emissions source contributions and trends to allow the community to formulate policies, best practices, and programs to improve air quality. Increased behavior changes to improve public health. 	 Operation of an online, publicly available platform including modeled and monitored data for duration of project. * At least 100 average visitors to online air quality map platform each week. #
Calculation of real-time PM2.5 concentrations and source contribution of hyperlocal air quality from prominent air quality sources, such as car traffic, truck traffic, area, point, background, and non-road sources.	 Increased understanding of major air pollution sources impacting historically underserved communities with disproportionate environmental and health impacts. Community knowledge of air pollution sources impacting their health. Increased access to information. 	 Documentation of community specific assessment of air pollution sources. * Engagement with at least 5 community groups regarding source apportionment. # Engagement with at least 5 sustainability groups regarding source apportionment. # Engagement of at least 5 decision-making cohorts regarding source apportionment. #
A multilingual Air Quality Analysis Dashboard that summarizes spatial and temporal air quality results and source drivers with community specific	 Community specific assessment of air pollution. Promotion of partnerships and community involvement. Increased community awareness of air quality across neighborhoods 	 Completion of the online, publicly available dashboard. * Engagement with at least 5 community groups using the dashboard. # Engagement with at least 5 sustainability groups using the dashboard. #

assessments of air pollution data.	 Increased access to information and tools that increase understanding and reduction of environmental and human health risks. Informing existing local plans (e.g., tree canopy master plan, regional trail plan). 	 Engagement of at least 5 decision-making cohorts using the dashboard. # Presentation of the dashboard through at least 20 social media, 5 mainstream media, and 3 live community presentations. #
Formation and convening of a Community Advisory Board (CAB) at project inception and throughout project.	 A strengthened network of partners engaged in air quality and public health. Informed project planning, monitor siting, data analysis and results, communications, and direct community engagement activities. 	 Partnership with at least 5 community groups and 5 sustainability groups through board membership. # Host approximately 12 CAB meetings on a quarterly basis. # Online, publicly available repository of documentation of CAB meetings, decisions and outcomes resulting from meetings. *
Installation and operation of live air quality screens with rotating educational information.	 Increased community awareness of local air pollution levels. Increased community awareness of health action recommendations based on current air quality. 	 At least 15 live educational air quality screens operating in Franklin County. # Tracking of at least 500 individual visits to website based upon QR codes displayed along with screens. #
Development and distribution of educational materials focused on air quality, health, and pollutants.	 Increased awareness of air pollution, health impacts, and individual actions to protect health and reduce pollution. Increased community buy-in for future initiatives resulting from the project. 	 At least 10 community engagement presentations completed. # At least 2 versions of educational materials created (general public and school-aged children). # At least 1,000 Franklin County residents engaged. #
Reporting and milestones.	 Tracking and reporting project progress on expenditures and purchases. Tracking, measuring, and reporting accomplishments and proposed milestones. 	 Completion of all reporting and tracking as required by US EPA and check-in monthly on timelines and milestones. Documentation of tracking of all expenditures and purchases during grant duration. MORPC will approve all requests for reimbursement only after reviewing completion of deliverables.

C. Timeline and Milestones

Table 2. All start and end dates are specified with respect to time of grant provision.

#	Task/Subtask	Deliverable	Start Month	End Month	Organization Responsible
		1. Project Management			
1a	Solicit RFP	Draft and gain approval for RFP; prepare contractor contract	1	4	MORPC, FCPH
1b	Project coordination	Set up work plan for staff and contractors	1	4	MORPC, FCPH
1c	Purchase Monitors	Identify monitors and complete purchase	1	4	MORPC
		2. Air Monitoring and Modeling			
2a	Collocate monitors with reference monitor	Monitor performance metrics will be quantified for 3 weeks	4	9	MORPC, FCPH
2b	Deploy Monitors	Monitors will be deployed and operational	6	9	MORPC, FCPH
2c	Monitor network upkeep	Two years of continued monitor network upkeep (quality assurance, troubleshooting)	6	32	MORPC, FCPH

2d	Real-time localized model implementation	Real-time localized model platform displaying real- time 50 m x 50 m pollution map	6	24	Consultant
2e	Real-time source contributions	Real-time source contributions displayed on model platform	6	24	Consultant
		3. Community Engagement			
3a	Rotating Screens	Identifying locations for rotating air quality screens and installation of those screens within the community	6	24	MORPC, FCPH, Consultant
3b	Community Advisory Board (CAB)	Identify and convene a CAB	1	6	MORPC, FCPH
3с	CAB Meetings	Conduct initial meetings for input on monitor placement	1	6	MORPC, FCPH
3d	Identify sites for monitors	List of sites will be prepared based on known sources and CAB feedback	1	6	MORPC
3e	Deploy additional monitors	Deployment of air quality monitors at schools, libraries, and community organizations in underserved communities	6	8	MORPC
3f	Analysis Dashboard	Summary of findings from multi-year monitor deployment and Real-time localized model modeling	24	36	Consultant
3g	Deliver insight on source contributions.	Figures, tables, and visualizations to support community engagement	24	36	MORPC, Consultant
3h	Educational Materials to Engage the Public/ Youth	Create educational materials focused on air quality, health and pollutants	9	36	MORPC, CAB, FCPH, Consultant
		4. Reporting			
4a	Quarterly Report	12 reports, one every 3 months	6	36	MORPC
4b	Final Report	One report, end of project, with summary of all findings and future implications	34	36	MORPC

Section 5- Quality Assurance Statement

Please see Other Attachments

Section 6- Programmatic Capability and Past Performance

A. Past Performance and B. Reporting Requirements - MORPC successfully completed a 2021 Surface Water Improvement Fund Grant from the Ohio EPA. This \$175,000 award funded Central Ohio Water Resources Planning work from October 1, 2020 through December 31, 2021. All expected outputs were achieved, and all required technical and financial reports were completed and submitted on time.

MORPC successfully completed a 2018 Franklin County Urgent Home Repair Grant awarded by Franklin County, using federal Community Development Block Grant funding. This \$650,000 award funded repair work for income eligible homeowners from July 1, 2018 through December 31, 2020. All expected outputs were achieved, and all required technical and financial reports were completed and submitted on time.

Finally, MORPC successfully completed a State Fiscal Year 2021 Planning Work Program (PWP) awarded by the Ohio Department of Transportation, using Federal Transit Authority (FTA) and other state/local funds. This \$2,912,359 award funded transportation planning, projects, and studies from July 1, 2020 through June 30, 2021. It is one of three major planning documents mandated by the federal

government for metropolitan planning organizations. All expected outputs were achieved, and all required technical and financial reports were completed and submitted on time.

C. Staff Expertise- MORPC is Central Ohio's agency for issuing air quality forecasts and notifies the public when ozone and PM2.5 levels are expected to be unhealthy for sensitive groups of people. The Sustainability Officer will provide guidance with 25 years of environmental program experience. MORPC is in process of hiring an Air Quality & Sustainability Program Coordinator to implement the project. MORPC also contracts with an air quality forecasting firm, Sonoma Technology, Inc, which bolsters the technical expertise. MORPC staff expertise in data and mapping can be leveraged for this project, along with expertise and support from communications and engagement staff. The project will benefit from leveraging the expertise of FCPH staff. More information can be found in the attached resumes.

Section 7- Budget Table and Detail

Line Item & Itemized Cost	EPA Funding**
Personnel	
Project Manager @ \$44.87/hour 167/hours for 3 years	\$7,493
Project Staff @ \$28.85/hour 1263.75 hours for 3 years	\$36,459
Project Staff @ \$27.38/hour 30/hours for 3 years	\$821.00
Project Staff @ \$49.87/hour 30/hours for 3 years	\$1,496
Project Staff @ \$30.05/hour 40/hours for 3 years	\$1,202
TOTAL PERSONNEL	\$47,471
Fringe Benefits	
57% of Salary and wages -Retirement, health benefits, FICA, SUI	\$27,058
TOTAL FRINGE BENEFITS	\$27,058
Travel	
Milage for PM: rate \$.585per x 10 miles x per year	\$18.42
Mileage for Staff: rate \$.585 x per 166.5 miles x per year	291.58
TOTAL TRAVEL	\$310
Equipment	
20 PM2.5 monitors at \$1,000/unit	\$20,000
TOTAL EQUIPMENT	\$20,000
Supplies	

Installation supplies	\$600		
Outreach materials and supplies	\$4,231		
TOTAL SUPPLIES	\$4,831		
Contractual			
Consultant for support services	\$246,000		
TOTAL CONTRACTUAL	\$246,000		
Other			
Subaward Costs – Franklin County Public Health	\$107,377		
TOTAL OTHER	\$107,377		
Indirect Charges			
Indirect Cost Rate x (Personnel + Fringe) = Indirect Costs (Negotiated Indirect Cost Rate = 63%)	\$46,953		
TOTAL INDIRECT	\$46,953		
TOTAL FUNDING	\$500,000		
TOTAL PROJECT COST"	\$500,000		

A. Reasonableness of Cost for Each Itemized Item

Personnel: MORPC will serve in the role of project manager and administrator of funds for this award. As such, the budget includes staff time for project management and support staff across the full scope of the project, including the implementation of the air monitoring network and the community and partner engagement activities. The project also includes staff support for communications and engagement, graphic design, and data and mapping.

Fringe Benefits and Indirect Costs: MORPC has adopted the Fixed Rate Method of calculating the Fringe Benefit and Indirect Cost Rates. The rates are calculated based on the most recently audited Fiscal Year with adjustments for projected changes. Once approved, the provisional rates are billed for the contract period. At the end of the Fiscal Year, the actual rates are calculated and the difference between the estimated and actual costs, for the period covered by the rates, are "carried forward" as adjustments to the future rates. The current fringe benefit rate is 57% of payroll costs and the current indirect cost rate is 63% of direct payroll/fringe. Fringe benefits include Holiday, Sick and Vacation Leave, PERS, Hospitalization, Workers Compensation, etc. Indirect costs include operational and administrative expenses (e.g., payroll processing, building rent, depreciation, etc.).

Travel: The project team estimates that the travel necessary for monitor placement and community engagement activities will be roughly 500 miles over the course of the project.

Equipment: \$20,000 has been identified to purchase 20 Clarity Node-S PM2.5 air monitors with capability for data reporting and storage via cellular signal in locations where Wi-Fi is unreliable or not feasible. This cost includes an annual fee associated with operation of the monitors. The project team's previous air monitoring experience has shown that the need for Wi-Fi has become a barrier to some locations and has also hindered accurate data collection.

Supplies: Supplies for air monitor installation kits will be purchased to support siting, installing, and maintaining monitors. Other supplies include office supplies and materials for outreach and engagement activities.

Contractual: The Consultant estimated fee of \$246,000 is necessary as neither FCPH nor MORPC have the subject matter expertise nor the technology for the modeling and associated data analysis to complete this project. The estimated cost is based upon current trends and the needs of the project. MORPC will solicit bids for consulting services through a competitive procurement process for the anticipated tasks described below, with estimated costs also provided for each major task:

- Develop a real time local air quality modeling platform to calculate PM2.5 concentrations and source contribution from mobile, area, point, background, and non-road sources. Developing the real-time modeling system will require consultant labor costs to develop and deploy the model, support costs, cloud computing costs, and cloud storage costs. The estimated cost for this task is \$184,500.
- Data analysis and air quality dashboard preparation to report project outcomes. The dashboard will summarize spatial and temporal findings over the modeling duration to inform community efforts to target specific sources for air quality improvement. The community could use this data to make informed decisions and plan activities to reduce their pollution exposures. The estimated cost is \$21,500.
- The Contractor support in preparing community engagement materials, setting up content for community-facing digital displays, developing a community engagement feedback tool, and participating in community event presentations. The estimated cost for this task is \$40,000.

Other: Franklin County Public Health (FCPH) will be the subawardee and support community engagement along with other critical project needs, including gathering and presenting health data, engaging partners and community members, planning outreach activities, supporting monitor placement and maintenance, and informing initiatives to address disparities. Two key staff are identified to assist with the project, the Sustainability Supervisor and Environmental Health Educator. Funding will support staff time and roughly 17% of staff time will be allocated to the project throughout the grant cycle.

B. Expenditure of Awarded Funds - MORPC has a long and successful history of managing federal and other public funds, and with a \$22M budget, is ready and capable of administering this grant. MORPC has received the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association and has received awards from the Ohio Auditor of State for several years for clean audits. All costs proposed are reasonable, allowable, allocable, and necessary to the project. MORPC has great experience overseeing these types of projects through past and current programs. Additionally, MORPC will subgrant funds to FCPH to conduct outreach and other critical work to support the project. MORPC has processes and procedures in place and adheres to segregation of duties to ensure that all local, state, and federal financial rules are followed, and public funds are protected. Financial services are centralized at MORPC and the Finance Team will oversee the program's finances.

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Manifest for Grant Application # GRANT13579791
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Grant Application XML file (total 1):

1. GrantApplication.xml. (size 27086 bytes)

Forms Included in Zip File(total 6):

- 1. Form ProjectNarrativeAttachments 1 2-V1.2.pdf (size 16040 bytes)
- 2. Form SF424 3 0-V3.0.pdf (size 24285 bytes)
- 3. Form SF424A-V1.0.pdf (size 23167 bytes)
- 4. Form EPA4700 4 3 0-V3.0.pdf (size 22882 bytes)
- 5. Form OtherNarrativeAttachments 1 2-V1.2.pdf (size 15908 bytes)
- 6. Form EPA KeyContacts 2 0-V2.0.pdf (size 37283 bytes)

Attachments Included in Zip File (total 12):

- 1. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1237-AAMW letter of support.pdf application/pdf (size 39841 bytes)
- 2. OtherNarrativeAttachments 1_2 OtherNarrativeAttachments 1_2 -Attachments 1236-IRS 501c3 reaffirmation letter 05-28-2019.pdf application/pdf (size 152822 bytes)
- 3. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1244-Whetstone Resume.pdf application/pdf (size 131489 bytes)
- 4. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1243-McAdams Resume.pdf application/pdf (size 206615 bytes)
- 5. ProjectNarrativeAttachments_1_2 ProjectNarrativeAttachments_1_2-Attachments-1245-EPA Air Monitoring grant proposal_3.24.22 FINAL.pdf application/pdf (size 1180566 bytes)
- 6. $SF424_3_0$ $SF424_3_0-1234$ -Congressional Dist. Form 1.pdf application/pdf (size 38904 bytes)
- 7. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1242-Abraham Resume.pdf application/pdf (size 215993 bytes)
- 8. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1241-YWCA letter of support.pdf application/pdf (size 88196 bytes)
- 9. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1240-SSAC letter of support.pdf application/pdf (size 56935 bytes)
- 10. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1239-BA letter of support.pdf application/pdf (size 145245 bytes)
- 11. OtherNarrativeAttachments 1 2 OtherNarrativeAttachments 1 2-Attachments -1235-QA Statement Required FINAL.pdf application/pdf (size 212350 bytes)

12. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1238-ALA letter of support.pdf application/pdf (size 85261 bytes)

- 16. Congressional Districts:
- b. Program/Project includes OH-015 and OH-3